pared health outcomes (quality of life, productivity, resource use) across adherent vs. non-adherent respondents. **RESULTS:** 369 respondents with valid adherence data were included in the analyses. Mean age was 62.5 years (SD=10.5) and most respondents were insured (97.6%), nonsmokers (85.9%), and unemployed or disabled (65.0%). 23.3% were non-adherent at z-scores>0 (corresponding to MMAS-4>0 and MMAS-8>1), and this did not differ significantly across the treatment groups. Across treatments, non-adherent vs. adherent behavior was associated with significantly poorer health utilities (0.684 vs. 0.734, respectively), worse mental health status (46.0 vs. 51.9), greater impairment while working (24.2% vs. 10.5%) and overall work impairment (24.9% vs. 13.7%), all p<.05. Non-adherence was associated with non-significantly higher likelihood of hospitalization in the prior 6 months (24.4% vs. 18.0%, p=.19). **CONCLUSIONS:** Self-reported non-adherence to oral ET in women with BC was common and associated with statistically significant decrements in health-related quality of life, as well as work productivity impairments. Given the increasing use of oral ET in BC and detrimental effects of non-adherence, interventions to improve adherence in those at highest risk should be developed and tested.

MA2
NON-ADHERENCE TO ANTIPLATELET THERAPY AFTER HOSPITALIZATION FOR ACUTE CORONARY SYNDROME (ACS) INCREASES READMISSIONS, MORTALITY, HEALTH CARE USE AND COSTS

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OBJECTIVES: Current practice guidelines recommend antiplatelet therapy (AT) for ACS patients during and after hospital discharge. Nonadherence has been associated with higher risks of thrombosis, MI and mortality. Real-world studies of AT adherence post-discharge have been limited by lack of access to inpatient prescriptions. This study examines ACS mortality, hospital readmission, and health care costs by AT adherence post-discharge. **METHODS:** Patients hospitalized for ACS between 7/2009-7/2012 were identified from IMS Acute Coronary Syndrome Disease Records, which link patient-level information from IMS PharMetrics Plus™ health care claims data, IMS hospital charge data master, IMS ambulatory electronic medical record and mortality data derived from the Social Security Death Index. Patients with no diagnosis of ACS 180 days before hospital admission, and with confirmed inpatient AT therapy, were followed until the earlier of 360 days post-discharge or date of death. Adherence was measured by receipt of AT within 30 days post-discharge and by proportion of days covered (PDC) for the 360 day period post-discharge or up to the dates of death and readmission. Adjusted estimates controlled for patient demographics and CV risk measured pre-index, using logistic regression, Cox regression, and GLM. **RESULTS:** Of 2,994 patients selected for analysis, the 1,497 (49%) filling a script for AT within 30 days post-discharge had lower mortality (1.6% vs. 6.4%, p<0.0001), readmission rates at 30 days (7.8% vs. 14.6%, p<0.0001), and costs ($24,772 vs. $31,691, p=0.001) compared to patients not filling. After adjusting for patient characteristics, higher compliance (PDC) post-discharge was associated with reduced risks of mortality (HR=0.238, 95% CI: 0.158-0.359), readmission (HR=0.423, 95% CI: 0.364-0.512), and lower costs (p=0.004). **CONCLUSIONS:** Nonadherence with AT immediately after discharge and within 360 days was associated with higher mortality, readmissions, and costs. Study results show a significant opportunity to improve patient outcomes and reduce costs through higher AT adherence.

MA3
ADHERENCE AND PATIENT REPORTED OUTCOMES IN RHEUMATOID ARTHRITIS PATIENTS RECEIVING BIOLOGIC MEDICATIONS: ANALYSIS OF SPECIALTY PHARMACY PROGRAM DATA

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OBJECTIVES: To describe the adherence and patient reported outcomes (PROs) of rheumatoid arthritis (RA) patients taking biologic drugs enrolled in a specialty pharmacy (SP) program. **METHODS:** A retrospective analysis of pharmacy claims and PRO data for RA patients enrolled in a SP program and receiving biologic drugs from 12/1/2011 through 10/31/2013 was conducted. Patients with a primary diagnosis of RA (ICD-9 CM: 714.xx) were included. Only those with at least two pharmacy claims and those with a baseline and at least one follow-up of PRO measures were analyzed. Patients who were <18 or ≥90 years of age, who switched drugs or who declined involvement were excluded. Medication possession ratio (MPR) was used as a proxy for adherence and calculated based on pharmacy claims data. PROs were collected via telephone and included pain and fatigue measured on a numeric rating scale (NRS, scale: 0-10), and functional status measured using the Health Assessment Questionnaire-II (HAQ-II, scale: 0-3). Outcomes were collected at baseline and approximately every six months for the duration of the patients' enrollment. Descriptive statistics, Wilcoxon signed-rank, and correlations were used to analyze the data. **RESULTS:** A total of 2,385 patients were included. The mean age of patients was 54.80 years (±12.88) and 70.48% were female. The average MPR for all patients was 86.47% (±15.14%) over an average of 403.89 days (±167.20). Overall, 36.27% and 38.87% of patients had at least 1-point decrease on the pain NRS and fatigue NRS, respectively. Any reduction in the HAQ-II score was observed in 46.79% of patients at follow-up, which was statistically significant (-0.065, p<0.001). **CONCLUSIONS:** RA patients receiving biologic medications enrolled in a SP program had high therapy adherence and realized decreases in pain, fatigue and improvement in functional status from baseline.

MA4
SYSTEMATIC LITERATURE REVIEW AND META-ANALYSIS OF MEDICATION ADHERENCE WITH ONCE WEEKLY VERSUS ONCE DAILY THERAPY IN PATIENTS WITH OSTEOPOROSIS

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OBJECTIVES: To compare medication adherence rates for once weekly (QW) versus once daily (QD) dosing regimens in patients with osteoporosis. **METHODS:** A systematic literature review was conducted to identify articles published in English language journals that evaluated the rate of adherence to medications in patients with chronic disease. Relevant studies were identified using PubMed, EMBASE, and the Cochrane Library databases with a search window from January 2002 through August 2013. Twenty-two observational studies reporting adherence were identified by two independent reviewers. Of these publications, 7 reported complete information on relevant endpoints of studies in patients with osteoporosis. Meta-analyses examined 1) mean difference (MD) in adherence (defined using average medication possession ratio [MPR]) between QW and QD dosing groups and 2) odds ratio for adherence (defined using a cut-off of MPR ≥80%) for QW versus QD dosing. Heterogeneity was assessed using I^2 values and meta-analyses utilized both fixed and random effects models. **RESULTS:** The random effects meta-analysis revealed a significantly greater MPR with QW compared to QD dosing (pooled MD=12.29% [95% confidence interval (CI) 10.76%-13.82%]; n=9 [data reported in 7 publications]). Due to the high level of heterogeneity (I^2=83.4%), the fixed effects model results are not appropriate to report for the pooled MD. When examining the odds ratio for adherence, both fixed and random effects models provided similar results due to the low level of heterogeneity (I^2=7.9%; n=5 [data reported in 3 publications]). Using either model, the pooled odds of being adherent (MPR ≥80%) in the QW dosing group was approximately 1.9 times the odds in the QD dosing group (random effects OR=1.90 [95% CI 1.81-2.00]; fixed effects OR=1.92 [95% CI 1.84-1.99]). **CONCLUSIONS:** In our meta-analysis, QW dosing was associated with higher MPR values and greater odds of adherence compared to QD dosing in patients with osteoporosis.

RISK MANAGEMENT STUDIES

RI1
PREDICTING THE RISK OF CLOSTRIDIUM DIFFICILE INFECTION UPON ADMISSION: A RISK SCORE TO IDENTIFY PATIENTS FOR PHARMACIST ANTIBIOTIC REVIEW AND EDUCATION

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OBJECTIVES: Increasing morbidity related to *Clostridium difficile* infection (CDI) motivates methods to identify patients for preventive measures. We developed a risk score that can be calculated automatically upon hospital admission based on an electronic health record and used by inpatient pharmacists to identify patients who would benefit from antibiotic review and patient education. **METHODS:** We assembled a cohort of Kaiser Permanente Northwest patients with a hospital admission between 2005 and 2012 and identified CDIs in the six months following admission, inclusive of the initial hospitalization. Using Cox regression, we synthesized *a priori* predictors into a risk score, in which a higher number of points indicated higher risk for CDIs. We plotted the observed six-month CDI risk for each decile of predicted risk. **RESULTS:** We identified 721 CDIs in the six months following 54,186 hospital admissions, an incidence of 13.8 CDIs per 1000 patients. Patients with the highest predicted CDI risk had an observed incidence of 53 CDIs per 1000 patients--more than 25 times higher than the lowest-risk decile. Pre-admission patient characteristics that doubled the risk of CDI, were age 40 years or greater; use of high-risk antibiotics; chronic kidney disease requiring dialysis; liver disease; and more than 7 days of hospitalization within 60 days. The score differentiated patients who develop CDI, an extended C-statistic of 0.75. Predicted risk for CDI agreed closely with observed risk. **CONCLUSIONS:** Our risk score accurately predicted risk for CDI using pre-admission characteristics. Accurate predictions among the highest-risk subgroup of patients allow for the identification of patients who could be targeted for and who would likely benefit from pharmacist review of inpatient antibiotic use or educational efforts at the time of discharge planning, an improvement over simpler stratification strategies (e.g., class of antibiotic).

RI2
WARFARIN DISCONTINUATION AND STROKE RISK AMONG PATIENTS WITH NON-VALVULAR ATRIAL FIBRILLATION

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OBJECTIVES: To determine the association between warfarin discontinuation and stroke risk among patients with non-valvular atrial fibrillation (NVAF). **METHODS:** This is a historical cohort study of adult patients (≥18 years of age) with NVAF who were on warfarin in the MarketScan Commercial and Medicare Supplemental Claims and Encounters Database (01/2008-06/2012). Warfarin discontinuation was defined as a gap of ≥45 days in warfarin prescription within 1 year after initiation. Patients with and without warfarin discontinuation were matched at a 1:1 ratio using a propensity score method. Matched patients were followed for up to one year to determine risks of ischemic stroke, transient ischemic attack (TIA), and hemorrhagic stroke. Patient follow-up started from the discontinuation dates for discontinued patients and after the same duration of warfarin therapy for matched persistent patients. A multivariate Cox proportional hazards model was used to determine the association between warfarin discontinuation and stroke risk after adjusting for patient baseline demographic/clinical characteristics. **RESULTS:** A total of 27,000 discontinued and persistent patients were included in the final analysis. According to the descriptive analysis, discontinued patients had higher rates of ischemic stroke than persistent patients (0.99 vs. 0.52 per 100 patient years, P<0.001), while the rates of TIA (1.15 vs. 0.93 per 100 patient years, respectively; P=0.13) and hemorrhagic stroke (0.25 vs. 0.19 per 100 patient years, P=0.31) were similar between the two groups. After adjusting for patient characteristics, warfarin discontinuation was associated with significantly increased risk of ischemic stroke (hazard ratio [HR]: 2.04; 95% confidence interval [CI]: 1.47-2.84) and TIA (HR: 1.36; 95% CI: 1.04-1.78)